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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,319	02/12/2004	Jae-Young Jung	46295	4096
1609	7590	08/19/2005		
ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P. 1300 19TH STREET, N.W. SUITE 600 WASHINGTON,, DC 20036			EXAMINER MULL, FRED H	
			ART UNIT	PAPER NUMBER
			3662	

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/776,319

Applicant(s)

JUNG ET AL.

Examiner

Fred H. Mull

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_



## DETAILED ACTION

### *Observations*

1. For simplicity, all citations to the specification will refer to the paragraph number used in the application's Patent Application Publication, US 2004/0160360 A1.

### *Response to Arguments*

2. Applicant's arguments on p. 9, with regard to various objection(s), have been fully considered but they are not persuasive. This is now a 35 USC 112 1<sup>st</sup> rejection.

Amended claim ¶ 20 continues still contains non-physical equations. ¶ 20, line 1 states that  $x_k$  is a "position coordinate", while lines 4-5 state that  $x_p$  is a "component of ... velocity" and lines 5-6 state that  $y_p$  is a "component of ... velocity". Thus, equation 1a has dimensions:

$$\text{position} = \text{velocity} + \text{velocity}$$

which simplifies to:

$$\text{position} = \text{velocity}$$

This is a violation of fundamental physics. Each side of the equation MUST have the same dimensions.

Correction is required.

3. Applicant's arguments on p. 9, with respect to the rejection(s) of claims 1-16 over 35 USC 112 1<sup>st</sup> have been fully considered but they are not persuasive.

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Applicant argues the term pseudo velocity refers to the velocity component of the satellite in the direction of the MS. Equations 19-20 and ¶ 40 are cited to support this. As pointed out above, equations 19-20 do not make physical sense. ¶ 40 does not appear to make reference to a "velocity component". However, ¶ 106 appears that it may support this definition. If pseudo velocity is intended to be defined as: "the velocity component of the satellite in the direction of the MS", applicant must either:

(a) claim this feature; or

(b) explicitly define "pseudo velocity" in the specification, possibly by amending ¶106 to be an explicit definition of the term "pseudo velocity".

4. Applicant's arguments on p. 11, with respect to the rejection(s) of claim(s) 1-16 over 35 USC 112 2<sup>nd</sup> have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

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which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Equation 1 in ¶ 19 and along with the variable definitions in ¶ 20 do not make physical sense. ¶ 20, line 1 states that  $x_k$  is a “position coordinate”, while lines 4-5 state that  $x_p$  is a “component of ... velocity” and lines 5-6 state that  $y_p$  is a “component of ... velocity”. Thus, equation 1a has dimensions:

$$\text{position} = \text{velocity} + \text{velocity}$$

which simplifies to:

$$\text{position} = \text{velocity}$$

This is a violation of fundamental physics. Each side of the equation MUST have the same dimensions.

6. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The term “pseudo velocity” is not clearly defined.

The examiner would also like to suggest adding a table which summarizes what all of the myriad variables (e.g.  $PR_{sv\_gpssrv}$ ) stand for in order to help navigate the equations in the disclosure.

***Allowable Subject Matter***

7. Claim(s) 1-16 would be allowable if amended to overcome the rejection(s) under 35 U.S.C. 112, set forth in this Office action, without the addition of new matter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred H. Mull whose telephone number is 571-272-6975. The examiner can normally be reached on M-F 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred H. Mull  
Examiner  
Art Unit 3662

fhm



THOMAS H. TARCZA  
SUPERVISORY PATENT EXAMINER  
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